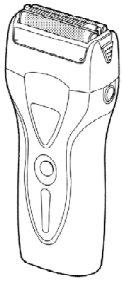
ORDER NO. SD0203E40C2

Service Manual

Wet/Dry Rechargeable Shaver

ES8026-E2



SPECIFICATIONS

SPECIFICATIONS

Power source	AC100-240V, 50-60Hz
	(Automatic voltage conversion)
Power consumption	90mA
Motor voltage	2.4V DC
Charging time	1-hour
Shaves per charge	14 times (3minutes shave)
Measurement	(H) 14.0 X (W) 6.0 X (D) 3.5 cm
Weight	230g, 0.51lbs
Supplied accessory	Soft case

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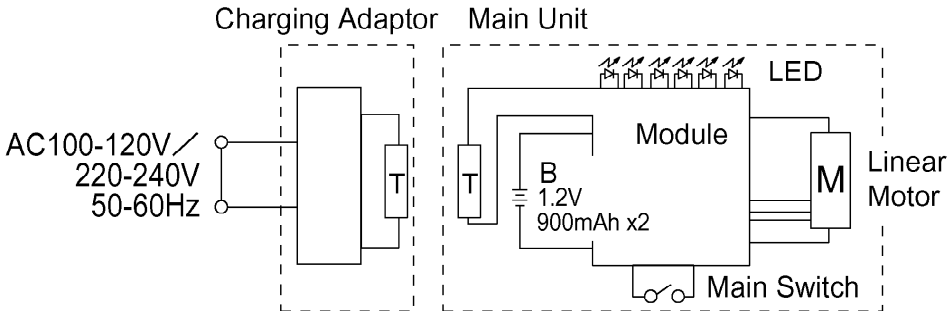
⚠ WARNING

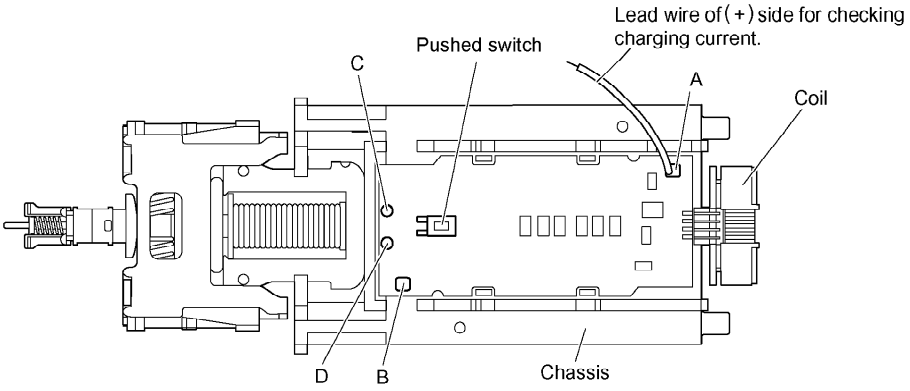
This service information is designed for experienced repair technicians only and is not designed for use by the general public.
It does not contain warnings or cautions to advise non-technical individuals of potential dangers in attempting to service a product.
Products powered by electricity should be serviced or repaired only by experienced professional technicians. Any attempt to service or repair the product or products dealt with in this service information by anyone else could result in serious injury or death.

Panasonic

1. SCHEMATIC DIAGRAM



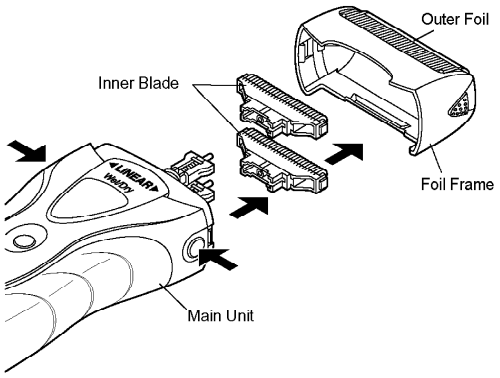
2. WIRING CONNECTION DIAGRAM



3. DISASSEMBLY INSTRUCTIONS

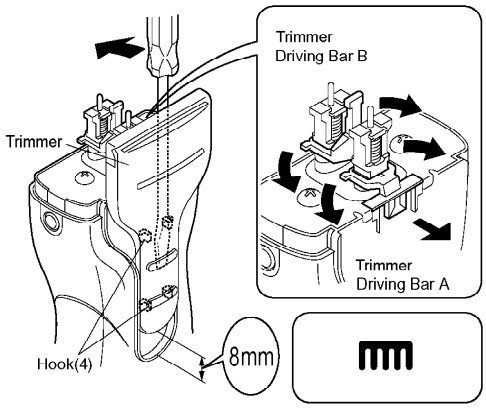
Follow the procedure below to disassemble the main unit.

1. Remove the cap, the outer foil with foil frame and the inner blades.

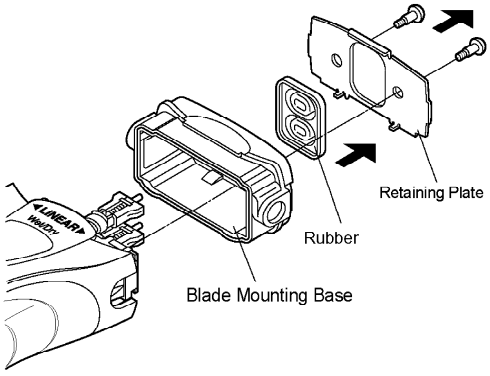


2. Unhook the right and left side of hooks at upside using a flat screwdriver with a position 8mm sliding above. Then slightly

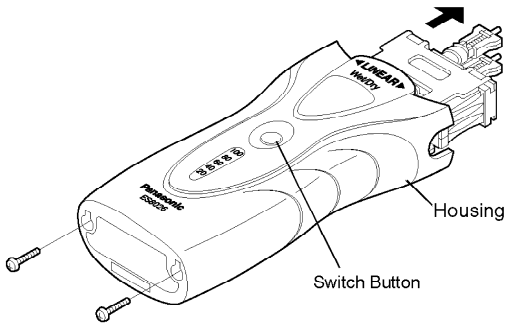
move the trimmer until position marking , and unhook the lower side of hooks.
To remove the trimmer driving bars, press bar outward.



3. Loosen two screws and the retaining plate. Take out the waterproof rubber and the blade mounting base.



4. Loosen two screws on the bottom.



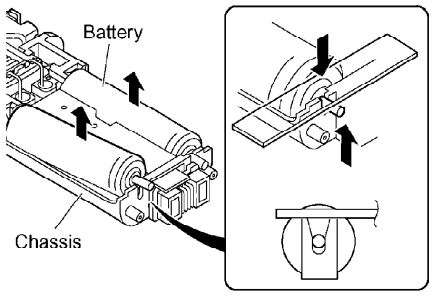
5. Take out the actuator from housing. Do not push the switch button when removing or inserting the actuator. It may cause the break of the pushed switch.

4. CAUTION IN ASSEMBLY

NOTE: When reassembling, replace the new waterproof rubber.

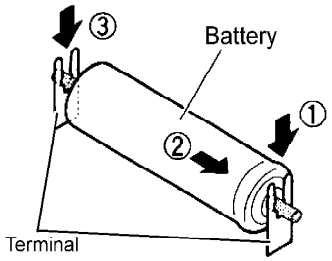
4.1. Battery

4.1.1. Replacement



To remove battery, fix the top of battery terminal with a flat plate and lifting up the battery pin.

4.1.2. Attachment

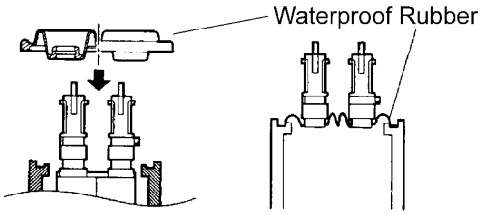


Follow the procedure to prevent the deformation of battery terminal.

1. Install (+) terminal of battery pin into the terminal.
2. Firmly set the battery sliding the direction of arrow.
3. Attach (-) terminal of battery.

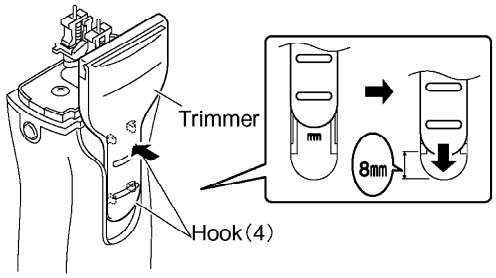
4.2. Waterproof Rubber

The waterproof rubber must be fitted the right way around. Install as shown in figure by inserting firmly to the set position.



4.3. Trimmer

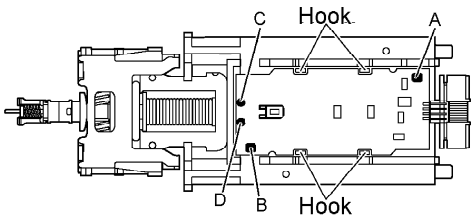
Set a position where marking m and hook lower side of two hooks. With a position 8mm sliding down, hook right and left side of hooks at upside.



4.4. Module

Module is soldered with connection terminal of chassis.
Follow the step below to remove the module.

1. Unsolder four points A, B, C, and D.
2. Remove the module from four hooks with chassis.



5. TROUBLESHOOTING GUIDE

(Refer to WIRING CONNECTION DIAGRAM)

< TROUBLE >		< CHECK. >		< REME
Motor does not rotate. Does not charge. Functions for a moment and stops.	→	<CHECK CHARGING ADAPTOR.> Connect to rated voltage with the normal main unit set onto the adaptor. Check if the charging lamp of main unit is lit.	NO →	Replace ch adaptor.

↓ OK

		<CHECK RECHARGEABLE BATTERIES.> Okay if the voltage of rechargeable batteries is more than approxi- mately 1.2V DC between (+) and (-) terminals. (Replace two rechargeable batteries at the same time even though one battery is defective due to series connection.)	NO →	Replace bo recharge- able batter the same time.

↓ OK

		<CHECK MODULE.> Insert the actuator into the housing, and connect to rated voltage with the normal adaptor. It is OK, if LED of main unit is flashing.	NO →	Check the soldering points from D.

↓ O

Replace m

↓ N

↓ OK

Replace lir
motor.

		<CHECK MODULE.> When switching ON and OFF, it is OK if LED is flashing and the motor rotates.	OK →	Go to the s "Check charging c

↓ NO

		<CHECK MODULE.> Check the soldering condition at each parts from A to D.	OK →	Replace lir motor. ↓ N

Replace m

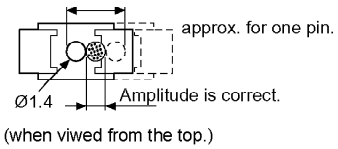
↓ NO

Resolder.

6. TROUBLESHOOTING GUIDE

(Refer to WIRING CONNECTION DIAGRAM)

< TROUBLE >		< CHECK.>		< REME
Noise is too loud. Amplitude is too large.	→	Oiling a drop for the outer foil.		
		↓ NO		
		<CHECK TRIMMER DRIVING BARS.> Check if there is any deformation with trimmer driving bar A and B.	NO →	Replace th trimmer driving bar
		↓ OK		
		<CHECK DRIVING HEAD AMPLITUDE.> Turn the switch ON, and measure the amplitude using a pin of drivin head. (See the figure shown below.)	NO →	Replace lir motor. ↓ N Replace m



(when viwed from the top.)

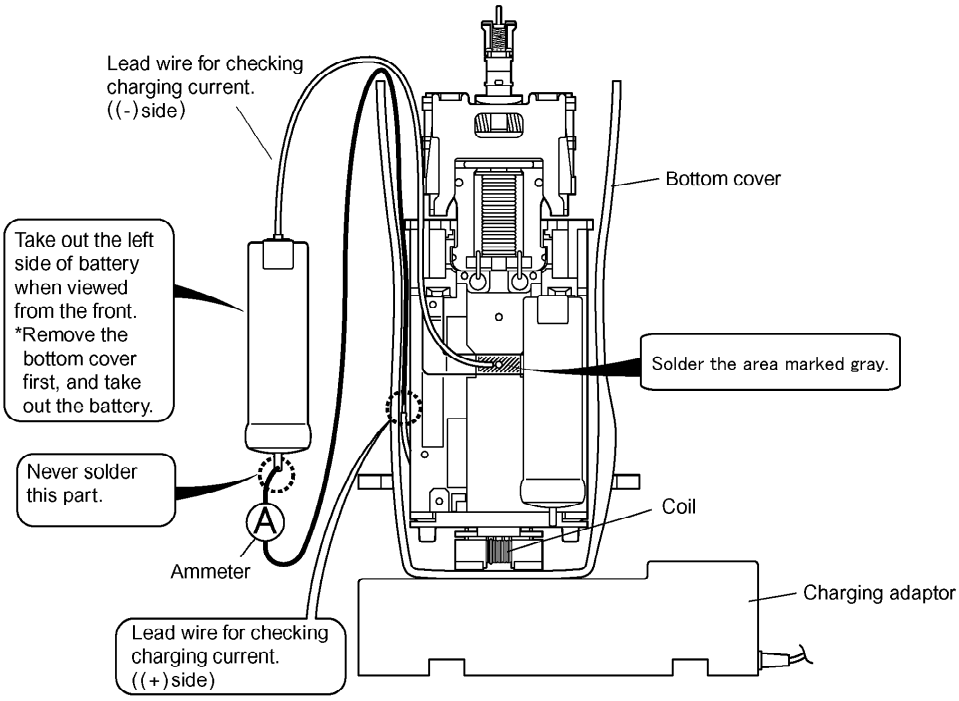
Amplitude is too small. Does not sharp enough.	→	<CHECK DRIVING HEAD AMPLITUDE.> Turn the switch ON, and measure the amplitude using a pin of drivin head. (See the figure as shown above.)	NO →
Does not function, but LED flashes.	→	<CHECK MODULE.> Take out the right battery. (Viewed from the front.) Connect lead wire with chassis and (-) terminal of battery. Check charging current between lead wire comes from module side (stated on WIRING CON- NECTION DIAGRAM) and (+) terminal of battery setting on the normal adaptor. Okay if it is more than 600mA when connecting to rated voltage.	NO →

Replace lir
motor.
(only the c
the
amplitude
clear-
ance (2.8m
full
wideth.))
↓ N
Replace m

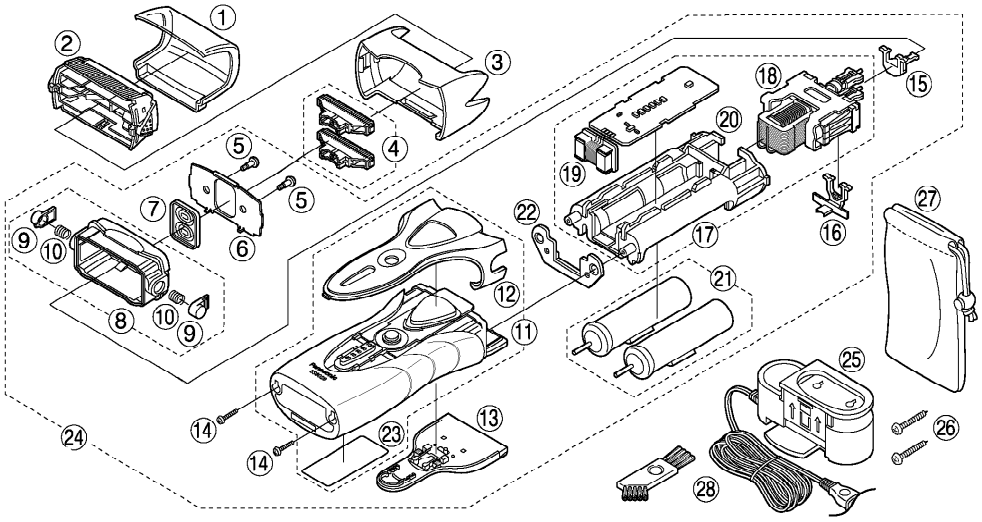
Replace m
↓ N
Replace lir
motor.

NOTE: The charging current fluctuates depending on the space between charging adaptor and the coil. / Please follow the procedure below.

1. **Put the coil and the bottom part of housing close together.**
2. **Put the bottom part of housing and the charging adaptor close together.**
3. **Measure the charging currents between (+) terminal of battery and lead wire comes from module side.**


Lead wire for checking charging current. ((-)side)
Bottom cover
Take out the left side of battery when viewed from the front. *Remove the bottom cover first, and take out the battery.
Solder the area marked gray.
Never solder this part.
A
Coil
Ammeter
Charging adaptor
Lead wire for checking charging current. ((+)side)

7. EXPLODED VIEW



8. REPLACEMENT PARTS LIST

NOTE

***A=available as an optional accessory**

***B=only available as set**

***C=available individually**

Ref. No.	Part No.	Part Name & Descriptions	Remarks			Per Unit
1	WES8023X7158	PROTECTIVE CAP				1
2	WES9077Y	OUTER FOIL				1
3	WES8026N0048	OUTER FOIL FRAME				1
4	WES9072Y	INNER BLADE	*B			2
5	WES882L9709	SCREW	*C			2
6	WES8035L0207	RETAINING PLATE				1
7	WES8003L0327	WATER-PROOF RUBBER				1
8	WES8921H0007	BLADE MOUNTING BASE				1
9	WES7006H3267	FOIL FRAME RELEASE BUTTON	*C			2
10	WES3001L0177	SPRING FOR RELEASE BUTTON	*C			2
11	WES8026S3158	HOUSING				1
12	WES8026S3968	SWITCH PANEL				1
13	WES8080H1507	TRIMMER				1
14	WES762L6007	SCREW	*C			2
15	WES8035L1077	TRIMMER DRIVING BAR B				1
16	WES8068L1087	TRIMMER DRIVING BAR A				1
17	WES8950L4307	LINEAR MOTOR ASSEMBLY				1
18	WES8035L1007	LINEAR MOTOR				1
19	WES8950L2127	MODULE				1
20	WES8035L0777	CHASSIS				1
21	WES882L2508	RECHARGEABLE BATTERY		Ni-Mh type		1
22	WES8921L0607	RUBBER				1
23	WES8026S8409	NAME PLATE				1
24	WES8026S3038	BODY BLOCK				1
25	WES8026H7664	CHARGING ADAPTOR		C-2 plug		1
25	WES8026H7660	CHARGING ADAPTOR		B-2 plug (U.K.)		1
26	WES663S6007	SCREW	*B			2
27	WES8023A7008	SOFT CASE				1
28	WES861B7057	CLEANING BRUSH				1
-	WES8026S8008	INDIVIDUAL BOX				1
-	WES8026S8108	OPERATING INSTRUCTIONS				1

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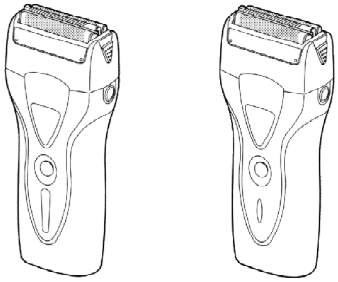
Service Manual

Wet/Dry Rechargeable Shaver

ES8025-A3 / ES8026-A3



SPECIFICATIONS

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Power source	**AC100-240V, 50-60Hz**
	(Automatic voltage conversion)
Power consumption	**90mA**
Motor voltage	**2.4V DC**
Charging time	**1-hour**
Shaves per charge	**14 times (3minutes shave)**
Measurement	**(H) 14.0 X (W) 6.0 X (D) 3.5 cm**
Weight	**230g, 0.51lbs**
Supplied accessory	**Soft case**

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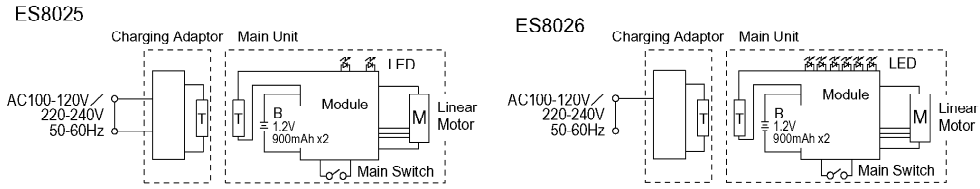
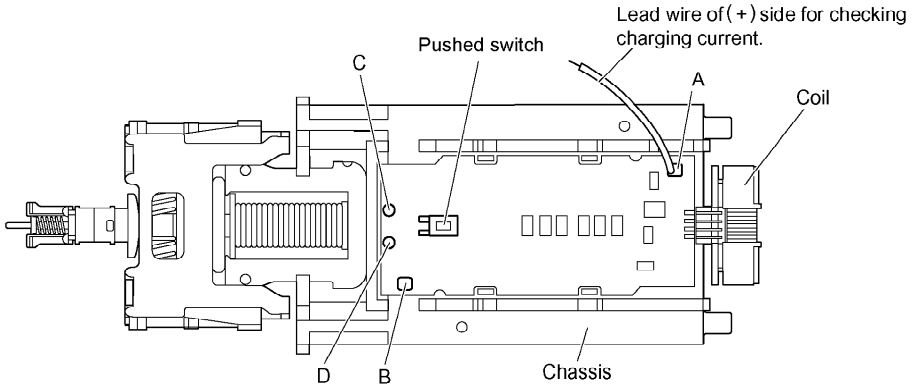
National

1. SCHEMATIC DIAGRAM



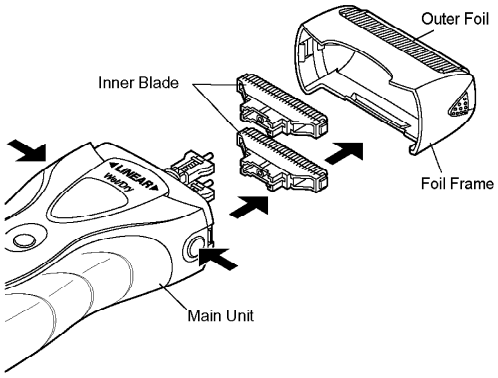
2. WIRING CONNECTION DIAGRAM



3. DISASSEMBLY INSTRUCTIONS

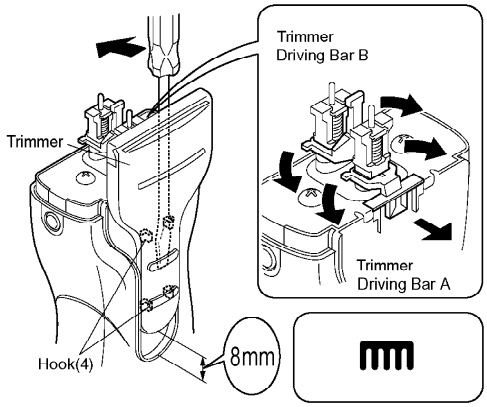
Follow the procedure below to disassemble the main unit.

1. Remove the cap, the outer foil with foil frame and the inner blades.

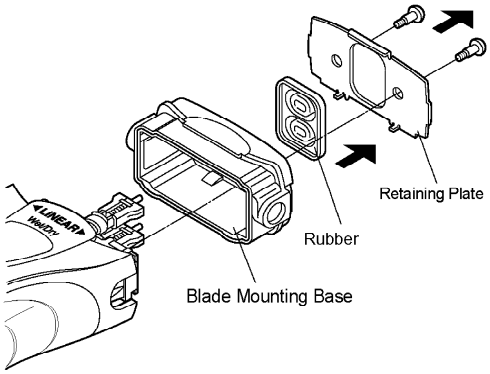


2. Unhook the right and left side of hooks at upside using a flat screwdriver with a position 8mm sliding above. Then slightly move the trimmer until position marking m, and unhook the lower side of hooks.

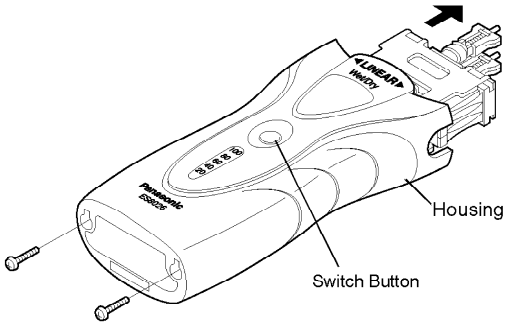
To remove the trimmer driving bars, press bar outward.



3. Loosen two screws and the retaining plate. Take out the waterproof rubber and the blade mounting base.



4. Loosen two screws on the bottom.



5. Take out the actuator from housing. Do not push the switch button when removing or inserting the actuator. It may cause the

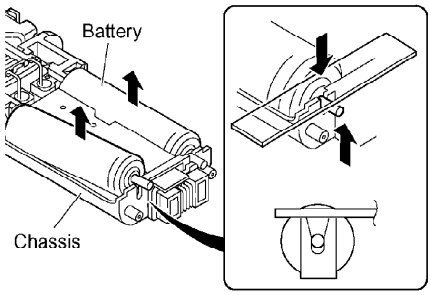
break of the pushed switch.

4. CAUTION IN ASSEMBLY

NOTE: When reassembling, replace the new waterproof rubber.

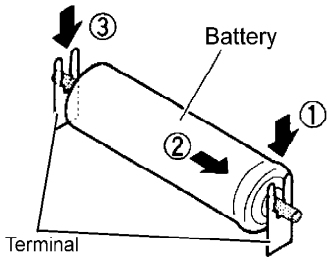
4.1. Battery

4.1.1. Replacement



To remove battery, fix the top of battery terminal with a flat plate and lifting up the battery pin.

4.1.2. Attachment



Follow the procedure to prevent the deformation of battery terminal.

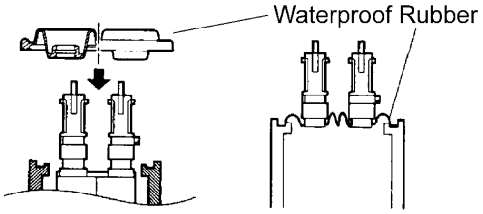
1. Install (+) terminal of battery pin into the terminal.

2. Firmly set the battery sliding the direction of arrow.

3. Attach (-) terminal of battery.

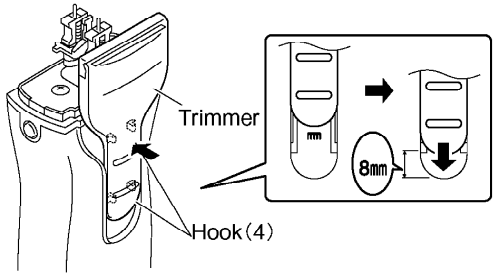
4.2. Waterproof Rubber

The waterproof rubber must be fitted the right way around. Install as shown in figure by inserting firmly to the set position.



4.3. Trimmer

Set a position where marking m and hook lower side of two hooks. With a position 8mm sliding down, hook right and left side of hooks at upside.

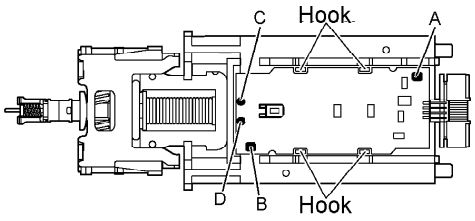


4.4. Module

Module is soldered with connection terminal of chassis.
Follow the step below to remove the module.

1. Unsolder four points A, B, C, and D.

2. Remove the module from four hooks with chassis.



5. TROUBLESHOOTING GUIDE

(Refer to WIRING CONNECTION DIAGRAM)

< TROUBLE >		< CHECK. >		< REME
Motor does not rotate. Does not charge. Functions for a moment and stops.	→	<CHECK CHARGING ADAPTOR.> Connect to rated voltage with the normal main unit set onto the adaptor. Check if the charging lamp of main unit is lit.	NO →	Replace ch adaptor.

↓ OK

		<CHECK RECHARGEABLE BATTERIES.> Okay if the voltage of rechargeable batteries is more than approxi- mately 1.2V DC between (+) and (-) terminals. (Replace two rechargeable batteries at the same time even though one battery is defective due to series connection.)	NO →	Replace bo recharge- able batter the same time.

↓ OK

		<CHECK MODULE.> Insert the actuator into the housing, and connect to rated voltage with the normal adaptor. It is OK, if LED of main unit is flashing.	NO →	Check the soldering points from D.

↓ O

Replace m

↓ N

↓ OK

Replace lir
motor.

		<CHECK MODULE.> When switching ON and OFF, it is OK if LED is flashing and the motor rotates.	OK →	Go to the s "Check charging c

↓ NO

		<CHECK MODULE.> Check the soldering condition at each parts from A to D.	OK →	Replace lir motor. ↓ N

Replace m

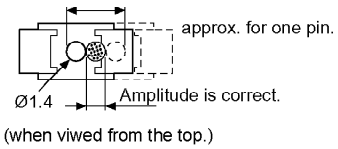
↓ NO

Resolder.

6. TROUBLESHOOTING GUIDE

(Refer to WIRING CONNECTION DIAGRAM)

< TROUBLE >		< CHECK.>		< REME
Noise is too loud. Amplitude is too large.	→	Oiling a drop for the outer foil.		
		↓ NO		
		<CHECK TRIMMER DRIVING BARS.> Check if there is any deformation with trimmer driving bar A and B.	NO →	Replace th trimmer driving bar
		↓ OK		
		<CHECK DRIVING HEAD AMPLITUDE.> Turn the switch ON, and measure the amplitude using a pin of drivin head. (See the figure shown below.)	NO →	Replace lir motor. ↓ N Replace m

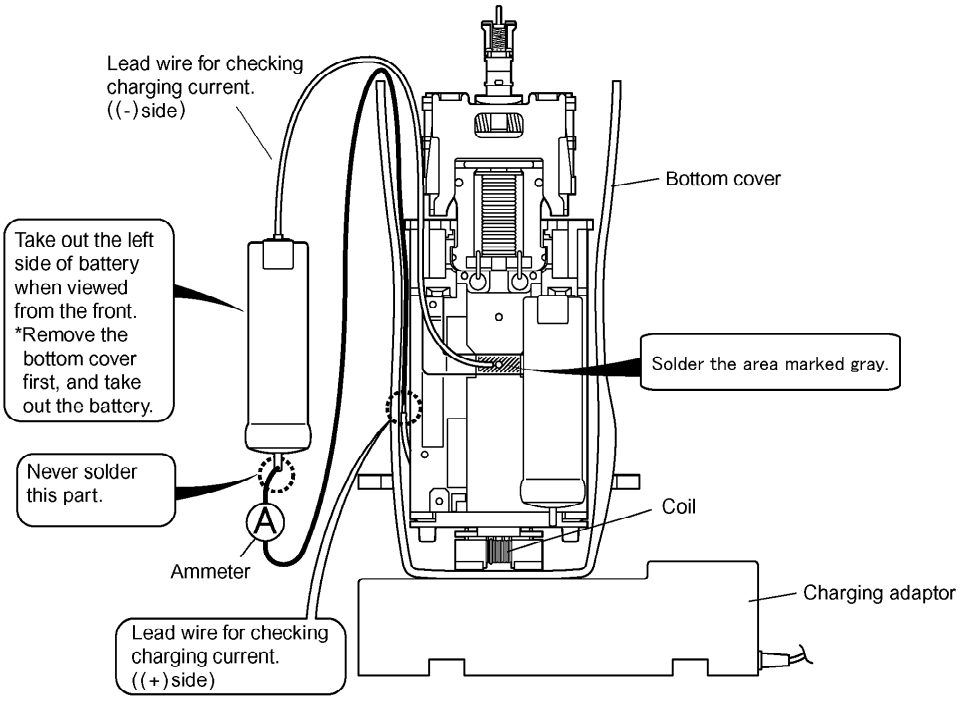


(when viwed from the top.)

Amplitude is too small. Does not sharp enough.	→	<CHECK DRIVING HEAD AMPLITUDE.> Turn the switch ON, and measure the amplitude using a pin of drivin head. (See the figure as shown above.)	NO → Replace lir motor. (only the c the amplitude clear-ance (2.8m full wideth.)) ↓ N Replace m
Does not function, but LED flashes.	→	<CHECK MODULE.> Take out the right battery. (Viewed from the front.) Connect lead wire with chassis and (-) terminal of battery. Check charging current between lead wire comes from module side (stated on WIRING CON- NECTION DIAGRAM) and (+) terminal of battery setting on the normal adaptor. Okay if it is more than 600mA when connecting to rated voltage.	NO Replace m → ↓ N Replace lir motor.

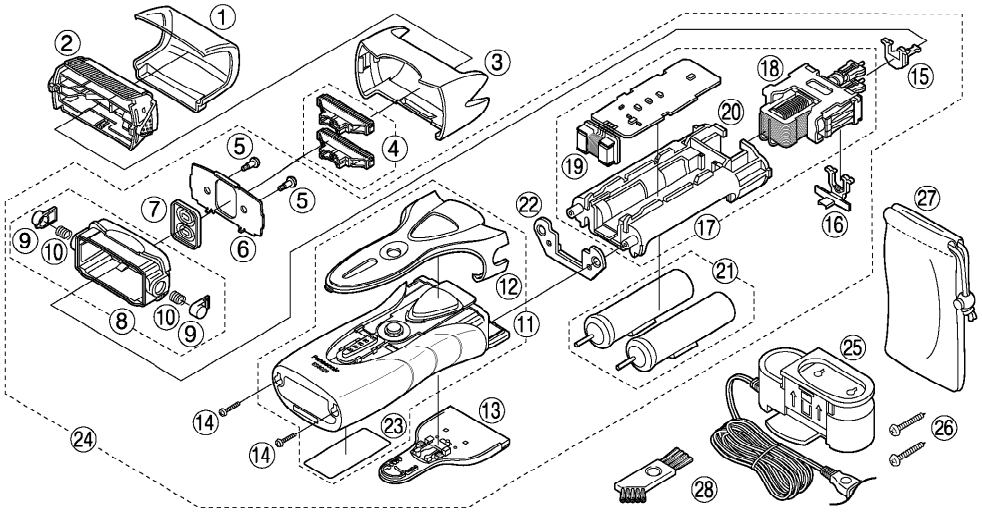
NOTE: The charging current fluctuates depending on the space between charging adaptor and the coil. / Please follow the procedure below.

1. **Put the coil and the bottom part of housing close together.**
2. **Put the bottom part of housing and the charging adaptor close together.**
3. **Measure the charging currents between (+) terminal of battery and lead wire comes from module side.**


Lead wire for checking charging current. ((-)side)
Bottom cover
Take out the left side of battery when viewed from the front. *Remove the bottom cover first, and take out the battery.
Solder the area marked gray.
Never solder this part.
A
Coil
Ammeter
Charging adaptor
Lead wire for checking charging current. ((+)side)

7. EXPLODED VIEW & REPLACEMENT PARTS LIST

7.1. EXPLODED VIEW for ES8025

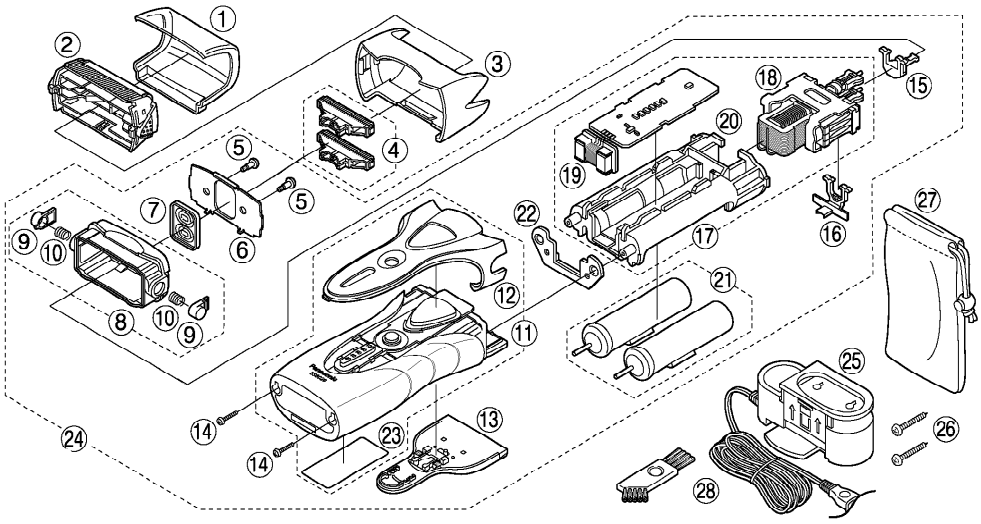


7.2. REPLACEMENT PARTS LIST for ES8025

NOTE
***A=available as an optional accessory**
***B=only available as set**
***C=available individually**

Ref. No.	Part No.	Part Name & Descriptions	Remarks			Per Unit
1	WES8023X7158	PROTECTIVE CAP				1
2	WES9077E	OUTER FOIL				1
3	WES8921S0047	OUTER FOIL FRAME				1
4	WES9072E	INNER BLADE	*B			2
5	WES882L9709	SCREW	*C			2
6	WES8035L0207	RETAINING PLATE				1
7	WES8003L0327	WATER-PROOF RUBBER				1
8	WES8921H0007	BLADE MOUNTING BASE				1
9	WES7006H3267	FOIL FRAME RELEASE BUTTON	*C			2
10	WES3001L0177	SPRING FOR RELEASE BUTTON	*C			2
11	WES8025S3159	HOUSING				1
11	WES8025S3160	HOUSING		only for KOREA		1
11	WES8025S3161	HOUSING		only for TAIWAN		1
12	WES8025S3968	SWITCH PANEL				1
12	WES8025S3969	SWITCH PANEL		only for KOREA/TAIWAN		1
13	WES8080H1507	TRIMMER				1
14	WES762L6007	SCREW	*C			2
15	WES8035L1077	TRIMMER DRIVING BAR B				1
16	WES8068L1087	TRIMMER DRIVING BAR A				1
17	WES8025L4308	LINEAR MOTOR ASSEMBLY				1
18	WES8035L1007	LINEAR MOTOR				1
19	WES8025L2128	MODULE				1
20	WES8035L0777	CHASSIS				1
21	WES882L2508	RECHARGEABLE BATTERY		Ni-Mh type		1
22	WES8921L0607	RUBBER				1
23	WES8025S8409	NAME PLATE				1
23	WES8025S8410	NAME PLATE		only for TAIWAN		1
24	WES8025S3039	BODY BLOCK				1
24	WES8025S3040	BODY BLOCK		only for KOREA		1
24	WES8025S3041	BODY BLOCK		only for TAIWAN		1
25	WES8026H7663	CHARGING ADAPTOR		C-2 PLUG		1
25	WES8026H7662	CHARGING ADAPTOR		A-2 PLUG		1
25	WES8026H7671	CHARGING ADAPTOR		KOREAN PLUG		1
26	WES663S6007	SCREW	*B			2
27	WES8023A7008	SOFT CASE				1
28	WES861B7057	CLEANING BRUSH				1
-	WES8025S8008	INDIVIDUAL BOX				1
-	WES8025S8009	INDIVIDUAL BOX		only for KOREA/TAIWAN		1
-	WES8026N8109	OPERATING INSTRUCTIONS				1

7.3. EXPLODED VIEW for ES8026



7.4. REPLACEMENT PARTS LIST for ES8026

NOTE
***A=available as an optional accessory**
***B=only available as set**
***C=available individually**

Ref. No.	Part No.	Part Name & Descriptions	Remarks			Per Unit
1	WES8023X7158	PROTECTIVE CAP				1
2	WES9077E	OUTER FOIL				1
3	WES8026N0048	OUTER FOIL FRAME				1
4	WES9072E	INNER BLADE	*B			2
5	WES882L9709	SCREW	*C			2
6	WES8035L0207	RETAINING PLATE				1
7	WES8003L0327	WATER-PROOF RUBBER				1
8	WES8921H0007	BLADE MOUNTING BASE				1
9	WES7006H3267	FOIL FRAME RELEASE BUTTON	*C			2
10	WES3001L0177	SPRING FOR RELEASE BUTTON	*C			2
11	WES8026N3159	HOUSING				1
11	WES8026N3160	HOUSING		only for KOREA		1
11	WES8026N3161	HOUSING		only for TAIWAN		1
12	WES8026N3969	SWITCH PANEL				1
12	WES8026N3970	SWITCH PANEL		only for KOREA/TAIWAN		1
13	WES8080H1507	TRIMMER				1
14	WES762L6007	SCREW	*C			2
15	WES8035L1077	TRIMMER DRIVING BAR B				1
16	WES8068L1087	TRIMMER DRIVING BAR A				1
17	WES8950L4307	LINEAR MOTOR ASSEMBLY				1
18	WES8035L1007	LINEAR MOTOR				1
19	WES8950L2127	MODULE				1
20	WES8035L0777	CHASSIS				1
21	WES882L2508	RECHARGEABLE BATTERY		Ni-Mh type		1
22	WES8921L0607	RUBBER				1
23	WES8026S8410	NAME PLATE				1
23	WES8026S8411	NAME PLATE		only for TAIWAN		1

Ref. No.	Part No.	Part Name & Descriptions	Remarks			Per Unit
24	WES8026N3039	BODY BLOCK				1
24	WES8026N3040	BODY BLOCK		only for KOREA		1
24	WES8026N3041	BODY BLOCK		only for TAIWAN		1
25	WES8026H7663	CHARGING ADAPTOR		C-2 PLUG		1
25	WES8026H7662	CHARGING ADAPTOR		A-2 PLUG		1
25	WES8026H7671	CHARGING ADAPTOR		KOREAN PLUG		1
26	WES663S6007	SCREW	*B			2
27	WES8023A7008	SOFT CASE				1
28	WES861B7057	CLEANING BRUSH				1
-	WES8026N8008	INDIVIDUAL BOX				1
-	WES8026N8009	INDIVIDUAL BOX		only for KOREA/TAIWAN		1
-	WES8026N8109	OPERATING INSTRUCTIONS				1